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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,032	11/15/2001	Adolf Zajber	HM-450	1209

7590

10/21/2003

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EXAMINER
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LIN, KUANG Y

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 10/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/003,032

Applicant(s)

ZAJBER ET AL.

Examiner

Kuang Y. Lin

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 1725

1. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The dependency of claim 9 is improper since it depends from claim 2 which had been deleted.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1 and 3-10 are again rejected under 35 U.S.C. 103(a) as being unpatentable over JP 56-80,364 and further in view of Behrends for the same reasons as set forth in last office action.

Namely, JP '364 substantially shows the invention as claimed except the flexible steel bands. However, Behrends shows the use of a flexible spine 40 for

Art Unit: 1725

connecting the blocks 46 to form a starter bar. The starter bar of Behrends combines the advantage of flexible starter bars and rigid starter bar in that a minimum of space and labour is required to store the starter bar after it has been severed from the cast strand and the starter bar is self-supporting in the curved configuration and therefore does not require support rolls. Also, because the starter bar does not have any conventional pin connections, problem of wear and link binding are also avoided, less maintenance is required and costs of operation decreased (see col. 6, line 38+). It would have been obvious to provide the flexible spine of Behrends for connecting the blocks of JP '364 in view of the advantage. With respect to the casting having an I-shape or H-shape as claimed, the cross-sectional shape of the cast strand depends on the designated product to be obtained. With respect to claim 3, Behrends teaches to make the flexible spine of a high strength material with high fatigue resistance. Thus, it would have been obvious to use any alloy steel which is high strength and fatigue resistance for making the spine. Further, it is conventional to provide a recess in the starter head for connecting the same to the strand (see, for example, Kuttner). With respect to claim 5, the claimed structure is also deemed to be conventional (see, for example, Knell et al). With respect to claim 6, the pin and hole in the blocks of Behrends is functionally equivalent to the key and the slot, respectively as claimed. With respect to claims 7 and 8, it would have been obvious to make the blocks of conventional starter bar with any configuration as long as the structure has the required strength.

Art Unit: 1725

4. Applicant's arguments filed July 28, 2003 have been fully considered but they are not persuasive.

a. In page 5 of the remarks applicants stated that the claimed dummy head is for casting strand of I-shape or H-shape. However, it would have been obvious to modify the configuration of the dummy head of JP '364 and Behrends for casting I-shape or H-shape strand.

b. In page 6 of the remarks applicants further stated that the spines of Behrends are flexible because of their short length. However, as shown in figures 4 and 10 of Behrends, each flexible spine is secured to the block 46 by fasteners 44. Thus, the flexibility of the assembled spines in its entire length shall be the same as that of a continuous one. It is apparent that the short length spine of Behrends can be handled much easier.

c. In the junction paragraph between pages 6 and 7 of the remarks applicants stated that there is a disadvantage of a large number of joints in Behrends. However, since Behrends use fasteners having conical head 44 and countersink apertures 42 for assembling the flexible spines to the block (see col. 3, line 59+), there will be no disadvantage of high friction as stated.

d. In page 7, last paragraph, applicants stated the disadvantage of JP '364 due to the use of a plurality of plates 2 for connecting two rows of segments. However, the claimed dummy head also use cross-connecting elements 11, which function the same way as the plates 2 of JP '364, for connecting two rows of segments.

Art Unit: 1725


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuang Y. Lin whose telephone number is 703-308-2322. The examiner can normally be reached on Monday-Friday, 10:00-6:30,.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas X Dunn can be reached on 703-308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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October 10, 2003



KUANG Y. LIN  
EXAMINER  
GROUP 320  
1725